2014

An Improved Stove for Canindeyu Paraguay

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Abstract

Our project identifies a potential solution to the harmful cooking method concern seen in Canindeyú, Paraguay. We recommend a new cookstove to ensure the safety of families and their environment, and outline steps that must be taken to successfully implement this improved technology.

Problem

Economic — Low-income families cannot afford current improved cookstoves, and resort to open fires

Environ. — The nearby Mbaracayú Reserve is becoming deforested, endangering the unique biological community

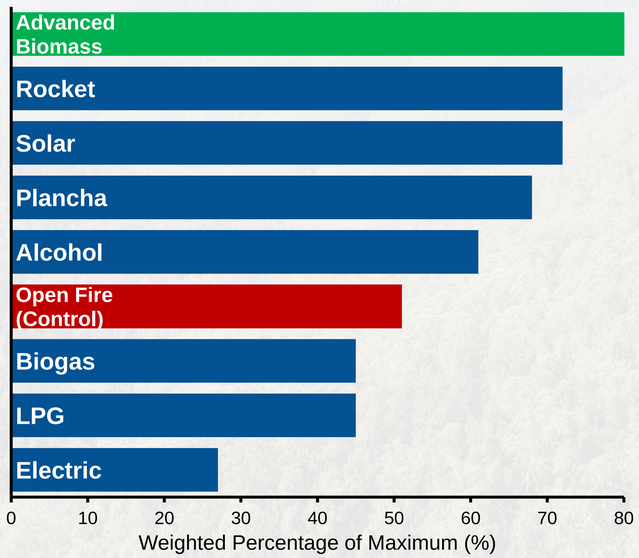
Social — High death rates from lung-related illness lead to an unstable social environment for children

Figure 1

Method

- Identified 8 potential cookstoves based on popular solutions, and established 13 categories to rate the cookstoves against
- Rated each stove, along with a control group for the existing technology, in each category
- Weighted each category based on importance to implementation success, and created a formula to combine all the ratings into a final decision matrix

Results



Recommendation

Raising Awareness

- Giving out flyers at local town halls and contacting government officials will inform the Canindeyú people of our improved cookstove

Promoting Understanding

- Holding workshops will show people how fogónes are an improvement over their current cooking method

Taking Action

- Partnering with NGOs will ensure fogónes are built for families that need them
- Our information can be passed to IQP groups at the future Paraguay Project Site

Figure 2

Project Goals

To reduce the negative impacts of energy poverty by:

- Identifying a substitute, improved cooking method appropriate for Canindeyú, Paraguay
- Creating an implementation plan to deliver this technology to the families within the community

Data Interpretation

The value “Weighted Percentage of Maximum,” on the lower axis, shows how ideally the cookstove performs. It expresses the cookstove’s score as a percentage of the maximum score possible. The higher the bar, the better the cookstove is, making Advanced Biomass the best option.

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